

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1 - 11 (Canceled)

12. (original) A method of limiting turbocharger rotational speed, the method comprising:

determining an inlet pressure corresponding to pressure of air at an inlet defined by a compressor of the turbocharger;

determining an inlet temperature corresponding to temperature of air at the inlet of the compressor;

determining an operating condition other than the inlet pressure and inlet temperature;

determining a maximum compressor outlet pressure value, corresponding to a maximum allowable pressure at an outlet defined by the compressor, as a function of the inlet pressure, the inlet temperature, the operating condition and a maximum allowable turbocharger speed value; and

controlling a turbocharger swallowing capacity or efficiency control mechanism associated with a turbine defined by the turbocharger in a manner that limits compressor outlet pressure to the maximum compressor outlet pressure value to

thereby limit rotational speed of the turbocharger to the maximum turbocharger speed value.

13. (original) The method of claim 12 wherein the step of determining an operating condition includes determining a mass flow rate value corresponding to a mass flow rate of air supplied to the intake manifold by the turbocharger compressor.

14. (original) The method of claim 13 wherein the step of determining a maximum compressor outlet pressure value includes:

determining a corrected maximum turbocharger speed as a function of the maximum turbocharger speed value and the inlet temperature;

determining a corrected mass flow rate as a function of the mass flow rate value, the inlet temperature and the inlet pressure;

mapping the corrected maximum turbocharger speed and the corrected mass flow rate to a compressor ratio corresponding to a ratio of compressor inlet and outlet pressures; and

determining the maximum compressor outlet pressure value as a product of the mapped compressor ratio and the inlet pressure.

15. (original) The method of claim 12 wherein the step of determining an operating condition includes determining engine speed corresponding to rotational speed of the internal combustion engine.

16. (original) The method of claim 15 wherein the step of determining a maximum compressor outlet pressure value includes:

determining a corrected maximum turbocharger speed as a function of the maximum turbocharger speed value and the inlet temperature;

mapping the corrected maximum turbocharger speed and the engine speed to a compressor ratio corresponding to a ratio of compressor inlet and outlet pressures; and

determining the maximum compressor outlet pressure value as a product of the mapped compressor ratio and the inlet pressure.

17. (original) The method of claim 12 wherein the turbocharger turbine is configured as a variable geometry turbine;

and wherein the step of controlling a turbocharger swallowing capacity or efficiency control mechanism includes controlling the swallowing capacity of the turbine by controlling the geometry of the turbine in a manner that limits the intake manifold pressure to the maximum intake manifold pressure value.

18. (canceled)

19. (Previously presented) The method of claim 12 wherein the turbine defines an inlet fluidly coupled to an exhaust manifold of the engine and an outlet, and wherein a wastegate is fluidly coupled between the turbine inlet and the turbine outlet, the wastegate controllable to selectively direct exhaust gas flowing out of the exhaust manifold through the wastegate and away from the turbine inlet;

and wherein the step of controlling a turbocharger swallowing capacity or efficiency control mechanism includes controlling the efficiency of the turbine by controlling the wastegate in a manner that limits the intake manifold pressure to the maximum intake manifold pressure value.

20. (canceled)

21. (Previously presented) The method of claim 12 wherein the turbine defines an inlet fluidly coupled to an exhaust manifold of the engine and an outlet, and wherein an exhaust throttle is configured to selectively control a flow rate of exhaust gas through the turbine;

and wherein the step of controlling a turbocharger swallowing capacity or efficiency control mechanism includes controlling the efficiency of the turbine by controlling the exhaust throttle in a manner that limits the intake manifold pressure to the maximum intake manifold pressure value.

22. (canceled)